Southwestern

Southwestern Medical Association

43rd Annual Meeting
Oct. 19-21, 1961

The Tropicana
Las Vegas, Nev.

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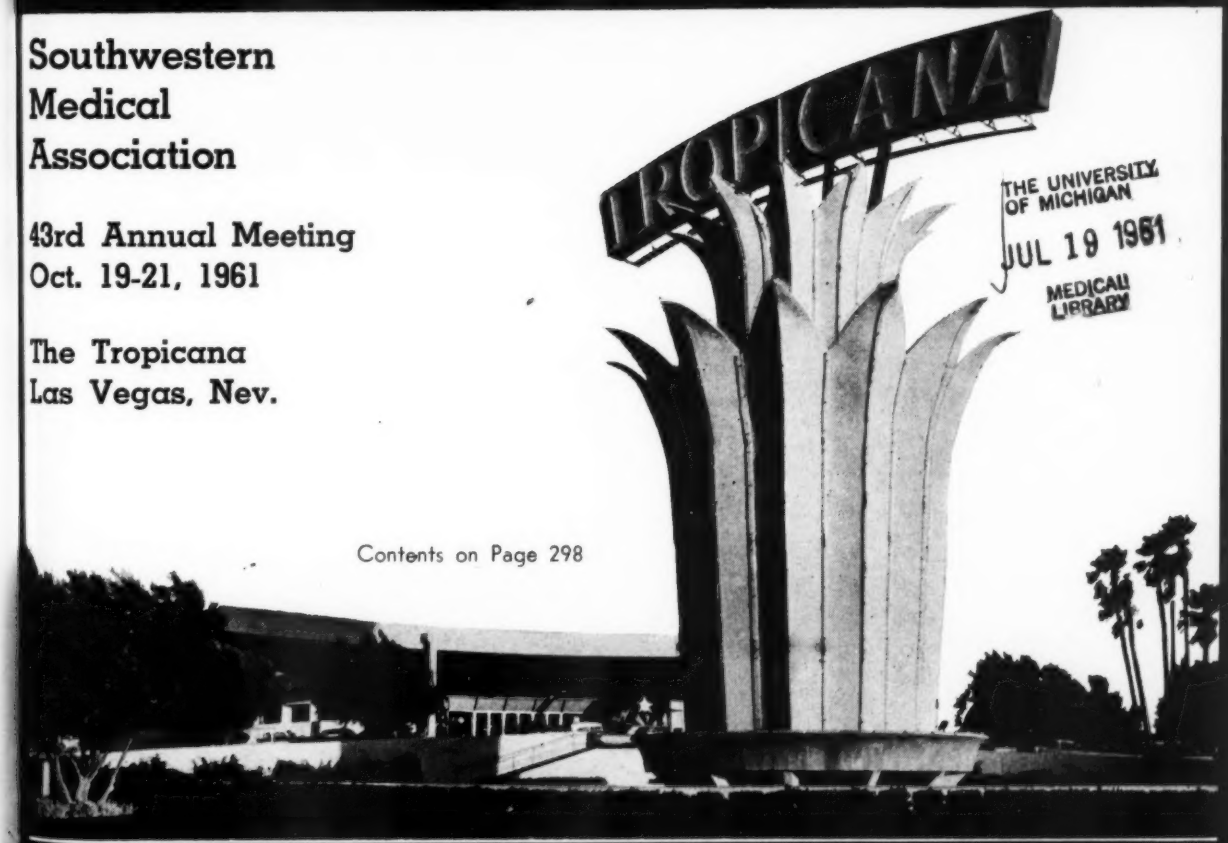

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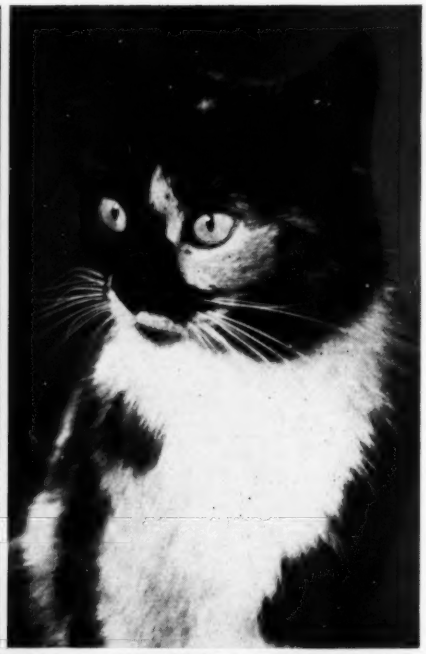

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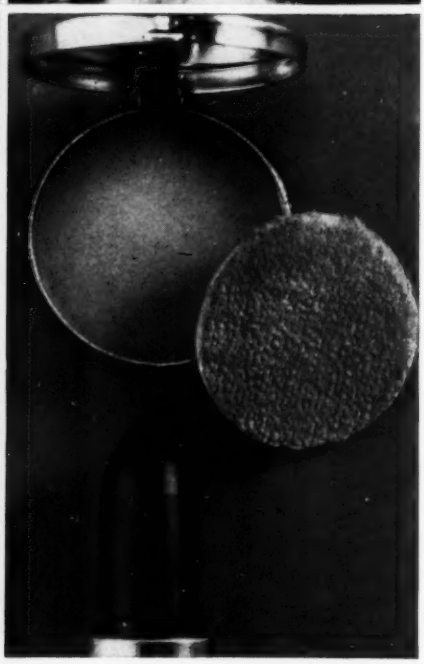

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COMING MEETINGS

Rocky Mountain Cancer Conference, Hotel Brown Palace West, Denver, July 12, 13, 1961.

Summer Clinic, New Mexico Chapter, American Academy of General Practice, Ruidoso, N.M., July 17-20, 1961. Fourteen hours Category I credit.

Postgraduate Course in Pediatrics, The University of Colorado School of Medicine, Stanley Hotel, Estes Park, Colorado, August 21-25, 1961.

El Paso Branch, University of Texas Postgraduate School of Medicine, El Paso County Medical Society's Turner Home, 1301 Montana Avenue, El Paso, Sept. 10, 1961.

Western Association of Railway Surgeons, Annual Meeting, Holiday Hotel, Reno, Nev., Sept. 28-30, 1961.

Arizona Academy of General Practice, Annual Scientific Session, Ramada Inn, Tucson, Oct. 12-14, 1961.

Southwest Obstetrical & Gynecological Society, Eleventh Annual Meeting, Konakai Club, San Diego, Oct. 15-17, 1961.

Southwestern Medical Association, 43rd Annual Meetings, Tropicana Hotel, Las Vegas, Nev., Oct. 19-21, 1961.

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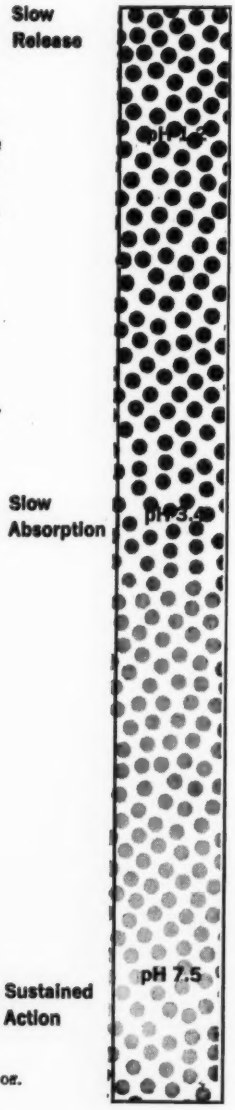

Judged to be "a nearly ideal formulation,"[1] Medrol Medules gave good to excellent results in 25 of 28 children with various acute allergic disorders. "There were no serious side effects and minor complaints were reported in only two patients."[1] The author also found that "there is a definite advantage for Medrol Medules inasmuch as much smaller doses seem able to produce full clinical relief. . . ."[1]

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As in all corticotherapy, however, there are certain cautions to be observed. The presence of diabetes, osteoporosis, chronic psychotic reactions, predisposition to thrombophlebitis, hypertension, congestive heart failure, renal insufficiency, or active tuberculosis necessitates careful control in the use of steroids. Like all corticosteroids, Medrol is contraindicated in patients with arrested tuberculosis, peptic ulcer, acute psychoses, Cushing's syndrome, herpes simplex keratitis, vaccinia, or varicella.

1. Dugger, J. A.: J. Michigan M. Soc. *59*:1812 (Dec.) 1960.

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Dr. Badger of Hobbs Elected President of New Mexico Medical Society

Dr. W. E. Badger, Hobbs general surgeon, was elected president of the New Mexico Medical Society at its 79th annual meeting in Santa Fe May 17-20, 1961.

Other new officers are Dr. R. C. Derbyshire, Santa Fe, President-Elect; Dr. C. Pardue Bunch, Artesia, Vice-President; Dr. Hugh B. Woodward II, Albuquerque, Secretary-Treasurer; Dr. Omar Legant, Albuquerque, Speaker of the House; Dr. John Conway, Clovis, Vice-Speaker; and Dr. W. W. Kridelbaugh, Albuquerque, and Dr. Harry P. Borgeson, Alamogordo, Counselors. The retiring president is Dr. Allan L. Haynes, Clovis surgeon.

Albuquerque was selected for the 1963 convention. Next year's meeting is to be at Hobbs.

The society named Dr. William F. Wittwer of Los Lunas as New Mexico General Practitioner of the Year. Dr. Wittwer, who will be 90 this Fall, has practiced medicine for over 62 years at Los Lunas. Outstanding in Dr. Wittwer's career have been his care of patients during flood time of the Rio Grande, his treatment of the 1918 influenza epidemic victims, and his fight against pellagra.

Dr. Stuart W. Adler of Albuquerque received the A. H. Robins Company Award for community service. The pharmaceutical firm sponsored the

AWARD PRESENTED—Dr. Stuart W. Adler of Albuquerque, second from left, accepts the A. H. Robins Award for community service by a physician, presented during the 79th annual meeting of the New Mexico Medical Society in Santa Fe on May 17, 1961. Making the award is Dr. Allan L. Haynes of Clovis, retiring society president. Standing by, at left, is Dr. W. E. Badger of Hobbs, new president, and at right, Karl Eckhardt of Aurora, Colo., divisional sales manager for the A. H. Robins Company. New Mexico was the fourth state to present the A. H. Robins award, having been preceded by Arizona, Hawaii, and South Dakota.

award in New Mexico for the first time to acquaint the public with the fact that the doctor is a civic leader as well as "the indispensable member of the health team."

In its House of Delegates meeting the society voted that the Kerr-Mills law was the best way to handle medical needs of the aged and invited the state's two senators and two congressmen to join it in implementing the Kerr-Mills law in New Mexico. It urged "immediate action by the Department of Public Welfare in order that the Kerr-Mills law may be put into effect in New Mexico." During the meeting Jack Malone, chairman of the State Welfare Board and Dale Helsper, the newly appointed welfare director, told the society they would do all in their power to keep socialized medicine out of New Mexico and reiterated their statement that they are working on a plan to implement a program in New Mexico for the Kerr-Mills law.

The society also took issue with statistics cited by Sen. Clinton P. Anderson in a letter to President Haynes last October 17. The letter from Senator Anderson read:

"It is the problem of hospitalization which bears so heavily upon older people. The best statistics available indicate that the average older person entering the hospital will have a bill of $450 for his hospital alone, let alone the cost of his physician or surgeon which would run the bill up to $1,000 on the average."

As a result of this statement, the Bernalillo County Medical Association at Albuquerque made a survey at Albuquerque's Presbyterian Hospital. Starting with January 1, a record was made of the first 100 patients 65 or over, their hospital charges and physicians' charges. The following was the result:

The average hospital charge was $327; the average physician's bill was $154; average total $481, against Anderson's $1,000.

Speakers Named For Ruidoso Summer Clinic

The fourth annual Ruidoso Clinics will be held July 17 through July 20, 1961, in Ruidoso, New Mexico, with sponsorship by the New Mexico Chapter of the American Academy of General Practice. The course will be Category I credit, twelve hours.

The following faculty members from the University of Texas Medical Branch at Galveston will speak:

Dr. James Leonard, Associate Professor of Medicine and Director of Cardio-Pulmonary Laboratory;

Dr. John Derrick, Assistant Professor of Surgery and Chief of the Cardiovascular Section;

Dr. W. J. Jinkins, Clinical Assistant Professor of Surgery (Orthopedics);

Dr. William McGanity, Professor of Obstetrics and Gynecology, Chairman of Department;

Dr. William Daeschner, Professor and Chairman, Department of Pediatrics.

Round table discussions will be as follows: Monday, The Obstetrical Patient with Pulmonary Disease; Tuesday, Bedside Diagnosis of Cardiac Conditions; Wednesday, Skeletal Growth Problems in Children; Thursday, Accidents and Fractures Peculiar to Children.

Pre-registration for the course is $25. Information may be obtained from Dr. R. W. Briggs at 406 N. Pennsylvania Avenue in Roswell, N. M.

ORIGINAL ARTICLES

Thoracic Trauma

R. G. McCorkle, M.D., *Austin*

Introduction

Management of thoracic trauma has become increasingly important in recent years. Civilian injuries are now more common than military accidents. Hunting, household injuries, automobile accidents, and acts of violence account for 85 to 90 per cent of the injuries. Because these accidents are not usual, and in many instances are not treated except in accident wards, a short review of the emergency management is advisable.

While physicians are aware of the serious complications which follow such injuries, few cases are seen by the same physician during the recovery period.

Decisions must necessarily be made correctly and without hesitation. Adequate help is nearly always available in large institutions; however, this is not always true in isolated communities where the physicians cope with this problem only occasionally.

General Classifications

The most common injuries can be identified as (1) simple rib fractures, (2) sternal fractures, (3) "crushed chest" and (4) penetrating intrapleural wounds. There may be single or multiple injuries, associated with any combination of intrathoracic trauma. For example, pneumothorax is frequently associated with a hemothorax. Rupture or penetration of the diaphragm, esophagus, or great vessels is either a single or a concomitant injury. Cardiac trauma is not usual, but should be considered as a possibility in chest trauma.

Unilateral or bilateral hemopeumothoracies are not uncommon complications. Emergency management consists of insertion of an interpleural catheter with waterseal drainage without suction, and needle aspiration of pleural blood collection. Rapid expansion of the lungs is usual, except in cases of lung parenchymal laceration with continued leak. The laceration generally involves the alveolar and terminal bronchi segments; such bases require gentle, constant suction necessary for complete lung expansion.

Penetrating chest wounds are managed essentially in the same manner, and thru-and-thru wounds by open thoracotomy. Pleural fluid is removed by thoracentesis followed by instillation of antibiotics into the pleural space.

The diagnosis of continued intrapleural bleeding is an indication for open thoracotomy. An intrapleural hematoma is best treated by an open procedure.

Open Wounds

Open thoracic wounds, frequently called "sucking" wounds, require immediate closure and lung expansion. The defect may be closed with surrounding tissue or a large area closed with a polyethylene sheet or, in some instances, wire mesh. Intrapleural catheter drainage is necessary to obtain lung re-expansion. Occasionally, more than one catheter is required for drainage.

Pericardial and cardiac trauma or hemopericardium are managed as separate entities with serial electrocardiograms for detection of muscle ischemia and aspiration of the pericardial sac to reduce the fluid pressure and avoid tamponade. Techniques of such procedures are fully described in current texts. [1-2]

The diagnosis of ruptured or lacerated dia-

phragm, bronchus, or esophagus calls for immediate surgical intervention and repair. Antibiotic coverage is essential, the drug of choice in each instance being recommended.

Roentgenograms of the thorax are essential for diagnosis. Various views should be taken when the patient's condition permits. Follow-up studied with X-rays are necessary for progress and further evaluation.

Antibiotic coverage is mandatory, and laboratory studies are often useful for confirmation of the clinical source and for developing bacterial resistance.

Other injuries should not be overlooked, as chest trauma frequently is associated with intra-abdominal injuries requiring surgical intervention. Even during the recovery period, the physician must be alert for later injuries, delayed splenic rupture, renal failure, and late vascular injuries.

Management or symptoms as they arise is important, as the patient's symptomatic complaints must be cared for as well as his more serious injuries.

Case Reports:*

(1) White female, 23, admitted April, 1956, discharged May 11, 1956. Gunshot wound, anterior left hemithorax, with hemopneumothorax. Treated with intercostal catheter, water sealed drainage, repeated thorancentesis, with antibiotics instilled in pleural space, attaining early lung re-expansion and preventing pleural clot. Roentgenogram chest May 4, 1956, lung field clearing without pleural resection. Chest roentgenogram May 11, 1956, lung fields clear.

(2) Male Negro, 25, admitted May 13, 1956, discharged May 23, 1956. Stab wound left chest, axillary line, anterior stab wound abdomen, requiring exploratory. Repaired diaphragm with splenectomy. Left pneumothorax treated with intercostal catheter with closed sealed drainage.

(3) Male Negro, 33, admitted March 17, 1956, discharged March 26, 1956. Gunshot wound left arm, abdomen, with penetration of diaphragm, liver, stomach, sigmoid colon, requiring laparotomy with bowel resection, repair of hepatic laceration and stomach laceration. Hemopneumothorax treated with catheter drainage, closed system, with early re-expansion. Antibiotics through hospital courses.

(4) Male White, 36, admitted February 2, 1956, discharged February 9, 1956. Stab wound left axilla, third intercostal space, with multiple abdominal stab wounds. Exploratory laparotomy with splenectomy. Hemopneumothorax, treated with intercostal catheter, frequent thoracentesis and antibiotics with complete lung expansion.

(5) Male Latin American, 24, admitted January 7, 1956, discharged January 23, 1956. Stab wound left chest and left wrist with tendon laceration. Right thoracotomy, pericardial sac opened, myocardial wound of right ventricle and laceration of internal mammary artery ligation.

(6) Male Latin American, 30, admitted December 3, 1955, discharged December 28, 1955. Stab wound lower chest, pleura not penetrated, exploratory laparotomy for intra-abdominal lacerations.

(7) Male, White, 62, admitted June 18, 1955, discharged June 24, 1955. Stab wound over sternum and left sternomastoid muscle, treated by ligation of carotid branches involved. Chest roentgenogram negative. Pleura not penetrated.

(8) Male Latin American, 56, admitted April 29, 1955, discharged May 6, 1955. Stabbed in right chest and upper arm, with several right brachial artery; insertion of intrapleural catheter, right, with repeated bronchial aspirations for prevention of atelectasis.

(9) Male Latin American, 24, admitted July 10, 1954, discharged July 28, 1954. Stab wound left upper quadrant; diagnosis: hemopneumothorax, laceration of spleen, small laceration left kidney. Treated intrapleural drainage with catheter, under water seal drainage, exploratory laparotomy with splenectomy and repair of renal laceration.

(10) Male Latin American, 83, admitted December 3, 1956, discharged January 2, 1957. Multiple gunshot wounds, self inflicted, chest wall, subcutaneous and deep, nonpenetrating into pleural, brachial artery severed. Primary repair brachial artery, debridement of soft tissue wounds treated as septic wounds.

(11) Male Latin American, 26, admitted June 20, 1954, discharged June 29, 1954. Penetrating

*From the author's private practice and the First Thoracic Service, Robert B. Green Hospital, San Antonio; Author, co-chief, 1954-1956.

wound upper abdomen, with laceration of liver and pancreas. Stab wound of heart. Heart wounds treated by pericardial tap. Exploratory laparotomy for visceral lacerations with repair.

(12) White female, 27, (previously reported), admitted October 25, 1955. Automobile accident, head and face laceration, emphysema neck with diagnosis of tracheal fracture. Negative chest roentgenograms, antibiotic, October 29, 1955, hoarseness improved. November 26, 1955, cervical emphysema disappeared; recovered, no cord paralysis, near normal voice.

(13) White male, 31, admitted May 29, 1955. Fracture sternum, multiple rib fractures, left hemothorax, laceration scalp with hematoma. Treatment consisted of sternal traction, intercostal catheter, left, thoracentesis for fluid. April 2, 1955, chest tube out, lung expanded, electrocardiogram negative for myocardial damage. April 7, 1955, wounds dressed, all healing and clean. April 11, 1955, discharged from hospital. April 16, 1955, clear lung field on fluoroscopy. April 30, 1955, rib calcification at fracture sites. March 3, 1956, no residual lesions, rib fracture healed.

(14) White male, 12, admitted August 5, 1955. Gunshot wound right thorax, massive, August 9, 1955, instilled Varidase® into thorax with thoracentesis, straw colored fluid, with antibiotics. August 18, 1955, febrile, considerable pleural reaction, right thoracentesis nonproductive. August 27, 1955, right lung 60 per cent expanded on fluoroscopy. October 17, 1955, lung field completely expanded. Roentgenogram, December 17, 1955, lung fields clear, adhesion right diaphragm, no limitation of pulmonary function.

(15) White male, 46, auto accident, February 5, 1955. Abrasions head and neck, cerebral concussion, mild multiple rib fracture left (6), fracture tibia and fibula, compound, communited. February 6, 1955, left pneumothorax, insertion intercostal catheter under water seal drainage, posterior parascapular swelling. May 27, 1955, healed fractures on roentgenogram, lung fields clear on auscultation. May 27, 1955, patient discharged, improved.

(16) White male, 36, admitted October 25, 1955, automobile accident, three ribs fractured, anterior-lateral, intercostal block, left, sandbag right hemithorax for paradoxical motion. October 29, 1955, pleural reaction right on roentgenogram, no fluid, contusion and hematoma lung, massive opacity of right hemithorax. November 5, 1955, paradoxical chest motion subsiding on external compression. November 8, 1955, discharged from hospital improved. Expiration and inspiration not limited. January 17, 1956, callus formation of rib fractures. May 16, 1955, lung fields clear, rib fracture healed, no pleural reaction on roentgenogram, brachial neuritis of right arm involving ulnar, subsiding. Patient improved. Did not return for followup.

(17) Male Latin American, 23, admitted July 31, 1955, discharged August 5, 1955. Stab wound left chest, with shortness of breath, pain in lower quadrant. Exploratory laparotomy, with diaphragm laceration involving spleen and stomach. Repair of diaphragm and stomach and splenectomy, pleura not entered.

(18) Male Negro, 37, admitted July 2, 1955, discharged August 10, 1955. Gunshot wound, left costal margin involving chest wall and abdomen. Exploratory laparotomy with repair of stomach and thoracentesis for hydropneumothorax, followed by empyema left, and open drainage. Thoracentesis of 100-150-150 cc., with purulent fluid on separate dates prior to open drainage. Roentgenogram diagnosis of pleural reaction with fluid secondary to traumatic pneumonitis.

Summary

The article describes certain basic procedures and complications in the diagnosis and management of chest trauma. Intercostal catheters were removed as soon as drainage ceased and chest films showed pleura clearing and lung re-expansion. Antibiotics were used in each case until temperature was normal and clinical finding showed no evidence of complications. Eighteen cases of thoracic trauma with review of management are presented. There were no deaths.

405 W. 15th Street

References

(1) Barrie, John: The Management of Emergencies in Thoracic Surgery. Appleton-Century-Crofts, Inc., New York, 1958.
(2) Lindskog and Liekon: Thoracic Surgery and Related Pathology. Appleton-Century-Crofts, Inc., New York, 1953.
(3) Lederle Laboratory Division, New York, N. Y.

Clinical Evaluation of Weight Controls During Pregnancy

ELMORE M. CAMPBELL, M.D.*
ARTHUR J. GORMAN, M.D.**
Boston

Since antiquity, it has been recognized that an increased intake of food has led to obesity. Modern prenatal care has shown the value of controlled weight gain in pregnancy, so that regular measurements of body weight during pregnancy is most valuable clinically. During the prenatal period excessive weight gain has been shown to be undesirable, avoidable, and an augury in certain cases of impending toxemia. It is well known that obese pregnant women face a number of increased hazards in child-bearing, many of which seem to be related to her excessive size.

At this point it is wise to define some of the terms which we will be using. It is rather strange that the word "obesity" was the original Latin "obesus" which actually meant leanness, but gradually the term came to have the opposite meaning; that is, of being overweight.

Hunger is a physiological complex, state or sensation evoked by the depletion of nutrients which manifests itself by an uncomfortable epigastric pressure and pain, and its awareness is made through gastric contractions. Appetite is the desire for food and is a matter of effect. It may be measured by the amount of food eaten.

Healthy men and animals seem to have a remarkable consistency in maintaining their weight. Yet, the prevalence of obesity in this country is on the increase and is accompanied by an increased mortality from a number of degenerative diseases, as was shown by life insurance examinations.

Obesity is the most frequent medical defect for which standard risk insurance is refused. Statistics have demonstrated the adverse influence of obesity on such diseases as diabetes, heart disease, chronic nephritis, hypertension, pulmonary emphysema, cirrhosis, venous thrombosis and embolism, and toxemias of pregnancy.

Some have gone so far as to call obesity the number one preventable public health disease, since there are at least 30,000,000 people in the United States that are overweight.

Diagnosis

What is obesity? The definitions usually given may be simplified to the abnormal excess of adipose tissue. A man may be considered as definitely obese if his total body fat content exceeds 25 to 30 per cent of total body weight, and a woman if it exceeds 30 to 35 per cent.

A very practical guide and aim for the patient should be the patient's weight at age 25 if a male and 21 if a female. The automatic referring to a height-weight table is unsatisfactory since it tends to include too many extremes. Taking the patient's own "normal" weight as a target gives him a sense of true identification.

A family dietary history may reveal obesity in the parents or grandparents, and habit and early childhood eating patterns cause many people to eat frequently and abundantly.

How can we make the diagnosis of obesity? Research laboratories with extensive apparatus can weigh a subject in air and then totally submerged in water with a correction made for the residual air. Then, by knowing that fat has a

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density of 0.97 and the remainder of the body a density of about 1.1, it is possible to calculate the percentage of fat when the total density is known. Since about one-half of the body fat is deposited in the subcutaneous tissues, it can be measured by roentgenograms or special calipers which measure specific skin fold areas.

By far the easiest way to make the diagnosis of obesity is the simple observation of the undressed subject, and if necessary one can do the "pinch test" in appropriate places, such as the area over the triceps muscle on the back of the upper arm or the tip of the scapula on the back. The patient may take as a practical guide that he should not be able to pinch more than 1 to 1.5 inches of a skin fold on the abdomen below the navel.

Psychological Aspect

Most people approach the problem of weight reduction not from the health angle but from the aesthetic view point of personal appearance. Such people fail to realize that weight reduction which is kept at a normal level adds longevity to their life span. Modern American society looks upon the Pickwickian fat boy as a weak-willed, lazy glutton, an object of humiliation and ridicule.

This attitude often causes the obesity to be self-perpetuating, since during grief and depressions there is an associated elevation in weight, and during episodes of frustrations and tensions there is decreased activity.

There was a period when fat people were rather pleased with themselves, and the world considered them to be rather jovial, cheerful, and easygoing. They still may be jolly, but the insurance companies do not share their optimism.

Classification

The old, simple differentiation of obesity into (1) alimentary, (2) metabolic, and (3) endocrine has now been reclassified by Mayer:

Genetic: In congenital adipose macrosomia; in monstrous infantile obesity; associated with Laurence-Moon-Biedle syndrome; associated with hyperostosis frontalis interna; associated with von Gierke's disease; in familial hypoglycemia (congenital lack of alpha cells), in genes predisposing to obesity.

Of hypothalmic origin: In adiposogenital dystrophy, with discrete or diffuse hypothalmic injury; occasionally with panhypopituitarism and nacrolepsy; Kleine-Levin syndrome.

Of other central nervous system origin: After frontal lobotomy; in asociation with cortical lesions, particularly bilateral frontal lesions.

Of endocrine origin: With insulin-producing adenoma of the islets of Langerhans; with diffuse hyperplasia of the islets; and in association with diabetes; with chromophobe adenoma of the pituitary without hypothalmic injury; in Cushing's syndrome (hyperglycocorticoidism); from treatment with cortisone or adenocorticotropic hormone; the Bongiovanni-Eisenmenger syndrome; in disorders of the reproductive system, including gynadrism and gynism, aspermatogenic gynecomastia without aleydigism, male hypogonadism, (sometimes with bulimia), postpuberal castration, menopause, ovarian disorder, paradoxical (Gilbert-Dreyfus) disorder.

Otherwise induced: By immobilization in adults and children; psychic disturbance; social and culture pressure.

In spite of the above classification, which seems to be heavily loaded with endocrine imbalances, it is rare to find a primary endocrine disturbance as a cause of obesity or emaciation. Yet, due to misconceptions, many obese subjects are referred to the endocrinologist.

Appetite

The appetite, in most people, is accurately related to metabolic requirements, and despite variations in seasonal and metabolic needs a fairly constant weight is maintained. There is no mystery about it—fat only comes from excess food intake, whereas a prolonged deficit will cause emaciation.

We hear constantly from the other side of our consultation desk the familiar complaint of the obese subject, "But, doctor, I hardly eat anything, but still I am fat." Yet these people do eat more, for stool examinations on such patients reveal the fact that they do not absorb any more fat per ounce of food eaten than do the lean subjects. These obese subjects have been shown to have

an appetite mechanism which requires a greater amount of food for satiation, and still a calorie is a calorie.

Pregnancy

Modern mothers are not anxious to accept obesity as the price for child-bearing, for the control of weight gain in pregnancy is a firmly established norm in the modern prenatal course. Most obstetricians have found that the weight gain during the entire pregnancy period should be approximately 20 lbs. The obese pregnant patient presents to the accoucher a number of complications during pregnancy, parturition and puerperium which are intimately connected to her excessive size. She inherits a higher incidence of toxemia, with its accompanying hazards of prematurity.

A relative dystocia is often found due to the excessive weight gain or to the large infant. A higher incidence of maternal and fetal morbidity and mortality has been recorded for these patients. An increase in the abnormal presentations and operative intervention has been brought out by many authors.

Waters found that the average weight gain in 3,230 cases of normal pregnancies was 23.2 lbs.; and Chesley in 11,960 cases, 23.1 lbs. — ranging from 13.3 lbs. to 37.4 lbs. How then is this weight distributed?

Chesley has shown the reproductive weight (baby, placenta and amniotic fluid) to be 11.18 lbs., and sometimes this weight is more than the total weight gain of the mother. The uterus and adnexa increase on the average of 2.5 pounds, and two to four pounds is found in the enlargement of the breasts. The remaining seven pounds is found in the increased water retention with its electrolytes and protein (nitrogen) retention.

The weight increment by trimesters (13.3 weeks) is variable. During the first trimester only one to three pounds is the medically approved weight gain during the latter weeks, for the middle weeks tend to compensate for the loss due to early anorexia and hyperemesis. The medically accepted weight gain during the second and third trimesters is eight and twelve pounds respectively. One would normally expect a greater increase in the third trimester since the fetus's absolute growth is greatest then; but, perhaps, the second three months is still concerned in counteracting the weight loss due to early nausea and vomiting.

Realizing that excessive weight gain during the prenatal period is undesirable and avoidable, many drugs have been used to curb the patient's appetite, but with time their popularity decreased. Thyroid hormone had the danger of thyrotoxic symptoms and several organic diseases made thyroid extract contraindicated. Belladonna preparations were used to inhibit appetite by causing loss of pleasure in eating. Sympathomimetic drugs, especially amphetamine, caused depression of appetite by a central phenomenon, but the patients developed a quick tolerance. Dinitrophenal had dangerous side effects.

The true appetite depressant drug which specifically reacts on the neutral pathways to the hypothalamus has yet to be discovered. In addition, it has been found that crash diets cause too rapid a weight loss with undesirable side effects of fatigue, nervousness and inability to concentrate, with a resultant rebound to pre-diet weight; and these vast weight swings did more harm to the body than the pre-diet obesity.

Liquid diets are contraindicated during pregnancy because they contribute to an increase of body fluid and cause constipation and/or diarrhea among some cases.

Methods and Materials

Because of the appetite control mechanism suggested by Mayer and others, we include in our study of pregnant subjects a depressant designed to elevate blood sugar levels, which has been reported upon as a non-stimulant to neither the digestive tract or to the central nervous system. This was given in the form of a low calorie candy-type agent containing vitamins and minerals.

The 105 women in the series were divided into groups of 35 subjects each. Group A was given the low calorie, candy-type, vitamin-mineral depressant. Group B was placed on dextro-amphetamine sulfate. Group C was on a diet alone. There was no selection in the patients, for they were taken in consecutive order as they were booked for prenatal care, and then they were alternated into one of the three groups.

It was fortunate that there were no patients found with a serious illness, chronic disease, a hematological problem (the average hemoglobin determination was 80 per cent or 12 grams), toxemia, an appetite problem or food faddism (as pica). In our control study many of our patients were seen as early as five to six weeks after gestation.

Some miscarried; and when this happened, the patient was dropped from the study and her case assigned to the next new patient. Others were discontinued when they experienced untoward side effects or when the patient developed a tolerance. The entire group was on a standard diet regularly used in our obstetrical practice.

Of course, there were additional routine prenatal medications given. All were placed on broad spectrum nutritional supplements and iron; and during the first 16 weeks of pregnancy, stilbesterol was administered to lessen the possibility of miscarriage.

All patients included in this study were examined every two weeks.

The average distribution of obstetrical patients is that 30 per cent are primigravida and 70 per cent multigravida. This was also bourne out in our series.

In Group A, 11 patients (31 per cent) were primigravida and 24 (69 per cent) multigravida. In Group B, 9 (26 per cent) were primigravida and 26 (74 per cent) multigravida. In the control Group C where diet alone was used, nine (26 per cent) were primigravida and 26 (74 per cent) were multigravida.

In the Group A patients, the pre-pregnancy weight showed that 17 women were underweight by an average of 8.8 pounds; and 18 were overweight, averaging 21 pounds. Group B had 18 patients underweight by an average of 14 pounds; and 17 were overweight, averaging 10 pounds. In the Control Group C, 17 patients were underweight by an average of nine pounds; and 18 were overweight, averaging 27 pounds.

Results

The overall results are tabulated in Table 1. The average total weight gain for the three groups during the prenatal period was: Group A — 20.8 pounds, Group B — 20.1 pounds, Group C (Controls) — 30.1 pounds. In the latter group, the weight gain range was much greater, varying from 10 to 35 pounds; whereas in the first two groups weight gain was more stable.

	GROUP A	GROUP B	GROUP C (CONTROL)
NUMBER OF PATIENTS	35	35	35
AVERAGE PRENATAL WEIGHT (LBS.)	136.7	139.5	145.0
AVERAGE TOTAL WEIGHT GAIN (LBS.)	20.8	20.1	30.1
AVERAGE WEEKS OF OBSERVATION	32.1	30.9	33.0

Table I

	WEIGHT GAIN BY TRIMESTERS (13.3 WEEKS)		
	I	II	III
GROUP A	4.6 LBS.	8.2 LBS.	8 LBS.
GROUP B	10 LBS.	5 LBS.	4.9 LBS.
GROUP C (CONTROL)	9 LBS.	10 LBS.	11.1 LBS.

Table II

There were a multitude of reactions and complaints among Group B subjects. The reactions were recorded as: dryness of mouth and nose, cramps in legs, blurred vision, insomnia, and headaches; but there was no pronounced increase in the blood pressure, cardiac or respiratory rates.

The following are direct quotes from the records: "nervousness," "head foggy," "jittery," "jumpy," "difficulty in getting to sleep," "generalized tremors," and "hopped-up."

We found that the appetite control mechanism designed to elevate blood sugar levels had a wide margin of safety. This low-calorie, candy-type appetite depressant containing vitamins and minerals (Group A, Ayds) produced no digestive or central nervous system side effects in our controlled group of pregnant subjects. It suppressed the appetite satisfactorily, had a high degree of patient acceptance and created a feeling of well-being.

The post-partum weight loss was dependent upon the type and amount of weight gain. The poundage in excess of 18 pounds was retained. The water gainers more quickly lost weight and sooner approached their prenatal weight than did the tissue gainers. In pregnancy there is an increase in the interstitial water volume. With the removal of the placental steroids there is an almost immediate compensatory diuresis. This was true also among those subjects who showed no visible edema since the body can retain water up to 10 per cent of its weight before edema becomes evident.

In Groups A and B subjects following parturition, their weight returned to or below their usual weight within 14 days provided they remained on their medication and diet. In Group C patients they retained an average of 3.6 pounds in excess of their normal increment.

Conclusions

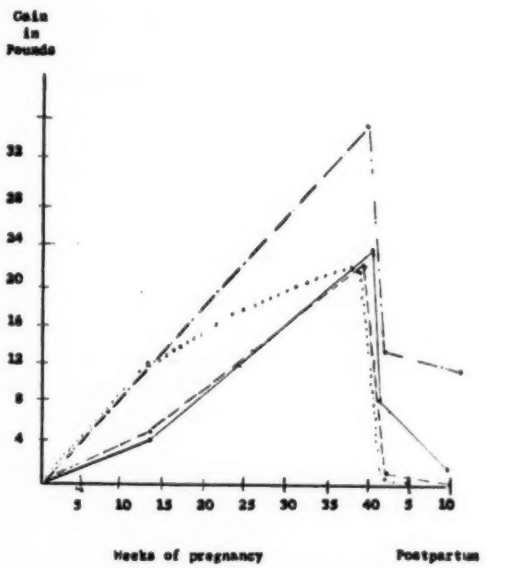
We control-studied a large number of patients from the onset of pregnancy through delivery and then for several weeks afterward when the subject is most anxious to regain her figure. We found that the diet carefully tailored to day-by-day and month-by-month requirements is the only present answer.

In the majority of cases appetite depressants had to be used, or weight gain became excessive. Selection of an appetite depressant is most important during this period. Many drugs produce a variety of side effects among pregnant subjects, including fatigue, nervousness, nausea, inability to concentrate, insomnia, constipation, diarrhea, and even a loss of pleasure in eating.

Liquid diets are contra-indicated during pregnancy on a sustained basis. They contribute to an increase in body fluid and cause constipation in some cases and diarrhea among others.

Unfortunately the true appetite depressant drug which specifically reacts on the neural pathways to the hypothalamus of the brain has yet to be discovered. Until such a discovery is made, old-fashioned will-power is the best appetite-control for the pregnant subject.

We found that the proper weight gain should be restricted to one to four and one-half pounds during the latter weeks of the first trimester. During the second and third trimesters, weight gains should be restricted to eight and 12 pounds respectively. Group A subjects alone (as shown in Table III) followed this medically desired weight gain program. While Group B subjects gained less



Theoretical generally accepted norm in solid line.
Subjects in group A in broken line.
Subjects in group B in dotted line.
Control group in dot-dash line.

Table III

GROUP	NO. OF ORIGINAL PATIENTS	NO. DISCONTINUED	REASON FOR DISCONTINUANCE	AVERAGE LENGTH (IN WKS) OF REPORTED STUDY
A	41	6	MISCARRIAGE	31.6 WKS.
B	48	13	4 MISCARRIAGE 9 CNS SYMPTOMS*	30.1 WKS.
C	39	4	MISCARRIAGE	32.4 WKS.

*SLEEPLESSNESS
NERVOUSNESS

Table IV

weight than the Control Group C, they made their greatest gains during the first trimester when weight control should be the most guarded and weight gain the lowest. Group A subjects gained 4.6 pounds during this period while Group B subjects gained 10 pounds. This is the period of greatest danger when miscarriage is most frequent

and toxemia is most apt to develop — the latter being caused in some instances by excessive weight gains. The multiple side effects and drug immunity noted among Group B subjects led to continual replacements of patients.

We also noted in the post-partum period that weight gained in excess of 20 pounds was retained by all subjects. Patients who had restricted their weight gain to 20 pounds or less, regained their normal weight rapidly.

(We are indebted to Dr. Ralph Angus of St. Elizabeth's Hospital for his assistance.)

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Treatment of Polyps of the Colon and Rectum

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Unless defined, the term "polyp" can lead to ambiguity and confusion. Hereinafter, the term polyp will be used to designate any projection into the bowel lumen, sessile or pedunculated, which grossly appears to be a new growth arising from mucosal epithelium and which is not obviously malignant to gross inspection. This definition limits use of the term to a gross, clinical finding and carries connotations of benignancy; it does not, however, exclude the possibility that in situ or invasive malignancy might be found on microscopic examination of tissue sections. Without going into detail, suffice it to say that that there are grossly discernible features in polyps which suggest an origin from mucosal epitheluim and which suggest benignancy or malignancy.

Villous (or papillary) adenomas and familial multiple polyposis are disease entities which represent very special aspects of the polyp problem. Specific consideration of these two entities has been excluded from the comments which follow.

Carcinoma All-Important

It is a well documented fact that many polyps are histologically heterogenous and may, on microscopic examination, show variable combinations of adenomatous tissue, adenocarcinoma in situ, and invasive carcinoma (1). The fact that invasive carcinoma may be present in any polyp is sufficient reason for urging the removal and histological examination of all polyps at the time of their discovery. The additional reason is sometimes given that even a completely benign polyp (all adenomatous tissue) will eventually become an invasive carcinonia if not treated (2). Although an imposing array of observations tend to support this contention, it should be pointed out that none of these observations offers conclusive proof of the possibility of such a transformation.

As implied in the above paragraph, from the practical standpoints of threat to life and extent of treatment, the presence or absence of invasive carcinoma in a polyp is all-important. Whereas in-situ new growths whose cytology and architecture suggest an invasive potential are a fairly common occurance in many parts of the body, it is almost certainly true that such tumors do not constitute a threat to life unless and until they invade locally. Penetration of the basement membrane is commonly considered a good criterion of local early invasion. Unfortunately, this criterion is difficult or impossible to apply in diagnosing early invasion in polyps of the large bowel. Carcinoma of the colon usually retains many of the structural characteristics of its tissue of origin; it is not a markedly anaplastic lesion. When invading elements consist of relatively intact acini or glands, penetration of the basement membrane does not occur. For this reason, many pathologists insist that glandular structures must have penetrated the muscularis mucosa before a diagnosis of invasive carcinoma can be made in a colonic polyp. Since the muscularis mucosa is not always well developed in colonic polyps, even this criterion may prove difficult in practical use. These considerations are only a few of the many that plague pathologists in attempting to decide about the presence or absence of invasive malignancy in colonic polyps. This subject has recently been discussed in an excellent review by Starr (3).

As reported in the literature, the incidence of malignancy in colonic polyps varies widely (1.8 percent-17 percent). The disparity in reported figures is undoubtedly due to the many variables involved in computing them (4, 8).

Anyone who undertakes to treat polyps of the colon and rectum must be able to decide when local removal is sufficient and when more radical resection is indicated. Such a decision is usually based on six considerations:

(1) The presence or absence of invasive malignancy. (2) The size of the polyp. (3) The location of the polyp. (4) The number of polyps. (5) Whether or not the patient has had previous polypectomies. (6) The age of the patient. These factors will be discussed at greater length below.

The Treatment of Polyps Within Reach of the Sigmoidoscope

Approximately 75 percent of polyps that develop in the colon and rectum occur within reach of the standard 25 cm. sigmoidoscope. All polyps discovered at sigmoidoscopy should be treated.

In general, those polyps whose greatest diameter does not exceed 5 mm. may be safely fulgurated without biopsy. The objection may be raised that invasive malignancy has been reported in lesions of this size. Turell recently reported invasive malignancy in a lesion 2.5 mm. in diameter (5). The author has treated a polyp showing invasive malignancy whose greatest diameter was only 5 mm. (Fig. 1). In spite of these isolated instances, the occurrence of invasion in polyps of the size under discussion is extremely rare. Further, in both instances cited herein, the polyps were successfully treated by local therapy (fulguration).

Most polyps less than 5 mm. in diameter appear as tiny sessile projections and are frequently referred to, rather disparagingly, as sessile mammillations or mucosal excresences. Although there is no question that some of these tiny lesions represent lymphoid aggregates, there is equally no question that many of them are small epithelial neoplasms. Since gross distinction is impossible, and since biopsy frequently leads to annoying

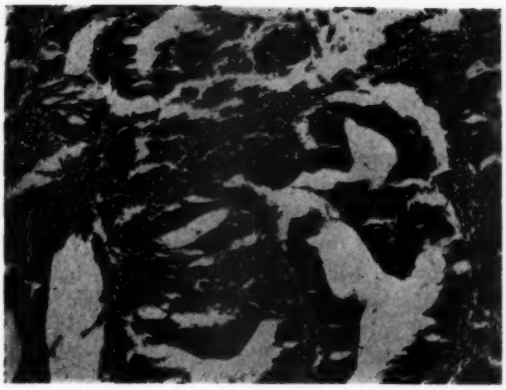

Fig. 1.

Photomicrograph showing low grade but infiltrating adenocarcinoma. Tissue section was made from a benign appearing mammillation 5 mm. in largest diameter. The lesion, situated at 20 cm. from the anal verge, was treated by fulguration. Patient is an 86 year old male.

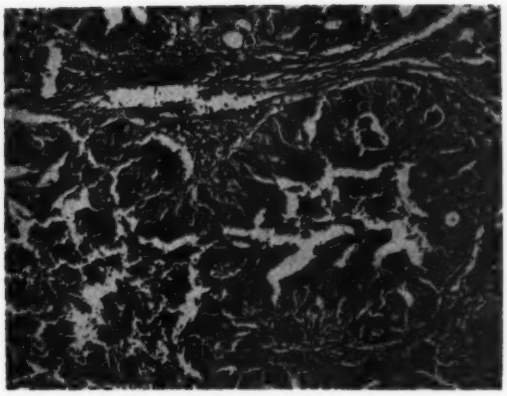

Fig. 2.

Photomicrograph showing anaplastic, invasive adenocarcinoma. Tissue section was made from a benign appearing, semi-pedunculated growth 2 cm. in diameter. The lesion, situated at 17 cm. from the anal verge, was initially removed in toto by snare excision. Subsequent anterior resection and pathological examination revealed it to be a type B, Duke's.

mucosal bleeding, it would seem best simply to fulgurate these tiny lesions at the time of discovery.

A polyp whose largest diameter falls between 5 and 10 mm. is probably ideally treated by snare excision, but in most instances "fractional" biopsy and fulguration are probably sufficient. Attempts at fractional biopsy in lesions this size usually result in the removal of a major portion, or all, of the polyp. Should examination of tissue sections subsequently show invasive malignancy, an appropriate radical resection, regardless of the level of the lesion, must be considered. Temporizing measures may be justifiable in elderly and poor risk patients.

A polyp whose largest diameter varies from 1 to 4 cm. should be removed in toto by snare excision and subject to careful histological examination. Again, the finding of invasive malignancy should be followed by an appropriate radical resection (Fig. 2).

If the greatest diameter of a polyp exceeds 4 cm. and if it is situated more than 10 cm. above the anal verge, it is usually difficult or impossible to remove it safely from below. Further, the danger of invasive malignancy increases greatly, probably logarithmically, with the size of the polyp (8). Because of these considerations, such polyps are probably best treated by primary anterior resection.

Polyps exceeding 4 cm. in diameter and situated in the 10 cm. of rectum immediately adjacent to the anal verge can frequently be excised in toto from below for biopsy purposes. A variety of techniques are feasible. Employment of these techniques becomes the more desirable in view of the fact that the alternatives are fulguration in situ or primary combined abdomino-pereneal resection. If the polyp has a pedicle sufficiently long or is situated on mucosa sufficiently redundant, it can frequently be delivered through the gently divulsed anus and removed in toto as an excision biopsy. This method offers the advantage of adequate exposure. If delivery through the anus is not feasible, adequate exposure can usually be obtained by the use of a proctoscope of exceptionally large diameter (1½ inches). Divulsion of the anal sphincter may be necessary to permit introduction of this instrument. The lesion can then be removed by snare. Finally, posterior proctotomy without transecting the anal sphincter, will frequently make local excision possible.

When any polyp is removed by snare excision, adequate exposure can be obtained only by the use of a sigmoidoscope of extra-large diameter (1⅛"-1¼"). Since the area of a circle increases as the square of its radius, a relatively small increase in the diameter of a sigmoidoscope yields

large dividends in the field exposed. When instruments of this caliber are used, general anesthesia is necessary to prevent pain.

Finally, it should be emphasized that laparotomy can occasionally be circumvented by examining patients with extra-long sigmoidoscopes under general anesthesia. Polyps situated as far as 40 cm. from the anal verge can sometimes be visualized and treated if this extra effort is made.

The nature and frequency of follow-up examinations in patients who have had a polyp in the terminal segments of their large bowel depend somewhat on the pathological findings, but in general the following program is usually adequate:

1. Repeat proctoscopy in three to six months from the date of treatment.

2. Repeat proctoscopy and barium enema examination (with air contrast studies) one year from the date of treatment.

3. Thereafter, yearly proctoscopic examinations. Ideally, barium enema examinations, with air contrast studies, should be performed at the same time.

The Treatment of Polyps Beyond Reach of the Sigmoidoscope

There is fairly general, if not universal, agreement that simple colotomy and local excision are adequate treatment for single colonic polyps that do not show invasive malignancy in tissue sections.

Controversy begins as soon as consideration is extended to cases where more than one polyp is involved, and this is true whether the polyps have occured simultaneously or in sequence.

A very common problem situation is that which arises whenever two or three small polyps (e.g. one cm. diameter) are found in the left colon at the time of barium enema examination. Should such polyps be removed by colotomy and local excision, or should an appropriate resection be performed? Those who favor resection feel that once multiple polyps have developed the mucosa in the involved area has demonstrated a definite proclivity to neoplastic transformation and should be removed, both in the interest of cancer praphylaxis and in the interest of averting future laparotomies. They also point to the frequency with which other small polyps, undetected on barium enema examination, are found on the resected specimens in such cases. The increasing use of coloscopy at the time of laparotomy may help to circumvent this problem (6, 7). Although resection has enjoyed considerable favor in the past few years, there is an increasing tendency lately to return to more conservative management (i.e., local excision) in the treatment of polyps of the large bowel (8). If previous laparatomy has been performed and there is reasonable certainty that the new polyp is not one previously overlooked, then resection seems indicated.

Polyps in pre-pubertal children constitute a separate and distinct problem. The danger of malignancy is practically nil and the incidence of serious complications attributable to the presence of polyps (intussuception and bleeding) is low. Contrariwise, the incidence of multiple laparotomies for the removal of polyps in children is distressingly high. For this reason it would seem best to delay laparotomy for a period of time after polyps are first discovered in the colon of a prepubertal child. Barium enema examinations (with air contrast studies) at six month intervals for one to two years may reveal that new polyps are forming, in which case surgery should probably be deferred until the situation is stabilized or until it becomes obvious that a fairly extensive surgical procedure will be necessary.

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Outpatient Evaluation of a New Antipruritic-Antiallergic Agent

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Research is constantly seeking a more effective antihistamine to relieve allergies without the usual aggravating side effects.

In the treatment of allergies which afflict an ever-increasing number of our population, drowsiness related to antihistamines has always posed a problem. This is especially important when one considers the vast number of people, both male and female, who comprise the "working class," where alertness during the working day is paramount.

Thus with the release of a potent, new antihistamine, generically designated dimethpyrindene maleate*, we felt that an evaluation of this new agent was imperative.

Material and Methods

Our group was composed of 100 nonhospitalized patients, 47 males and 53 females, ranging in age from two to 77 years. We used all formulations of dimethpyrindene; tablets, lontabs, syrup, and pediatric drops, depending on diagnoses and age of the patients.

With adults our initial dosage was the 1.0 mg. tablet, one, two, or three times a day. Where slight drowsiness proved to be a disturbing factor, we switched to lontabs (2.5 mg. b.i.d.) usually with resultant disappearance of the soporific effect. Preliminary studies[1] have shown the average dosage of the lontab to be 2.5 mg. b.i.d.

The lontab has the advantage of providing continuous medication over a long period of time. It has two separate parts. The coating, containing 0.75 mg. of the drug, is released during the first 20 minutes; the core contains 1.75 mg. dimethpyrindene which is slowly and regularly released over a period of 8 to 10 hours.

Since its availability to the profession, many investigators have reported clinical trials with dimethpyrindene in its various dosage forms. Double-blind studies have demonstrated that placebos are definitely less effective than dimethpyrindene.[2] We did not feel that another double-blind study would be justified in our group.

As will be seen from Table I below, the majority of our patients had allergic rhinitis in one form or another, our diagnoses being established by allergic history, and symptomology. In some, the etiologic agent was identified by scratch tests.

Results

Schiller[3] noted that relief of symptoms was usually observed by the patients within 30 to 60 minutes after ingestion of the drug. We found this to be true in our group also. In the majority of our patients the optimum dosage was one tablet tid.

*Dimethpyrindene maleate supplied as Forhistal by the Medical Division, CIBA Pharmaceutical Products, Inc., Summit, New Jersey.

No. of Patients	Diagnosis	Results			
		Marked	Moderate	Slight	None
41	Allergic Rhinitis (coryza,) hay fever, etc.)	29	6	5	1
19	Drug and Food Allergy	15	1	2	1
12	Acute Sinus Infection	3	4	3	2
12	Generalized Pruritus (including herpes zoster, chickenpox, urticaria, measles, poison ivy)	8	4	-	-
6	Motion sickness (including one case of Meniere's syndrome)	3	3	-	-
2	Bronchitis	2	-	-	-
2	Allergic Dermatitis	1	-	1	-
2	Chronic Cough (flu)	-	-	2	-
1	Asthma	1	-	-	-
1	Chronic Rhinitis	1	-	-	-
1	Contact Dermatitis	1	-	-	-
1	Allergic Sinusitus	-	1	-	-
100		63	19	13	4

Table I

As will be noted in this table, 63 of our patients obtained "marked" relief; 19 obtained "moderate" relief; 13 obtained "slight" relief; and only four reported no relief. Thus 82 per cent of our 100 patients experienced satisfactory relief of symptoms with dimethpyrindene.

All the cases of pruritus studied obtained "moderate" to "marked" relief.

The majority of our group of 100 patients had previously used many forms of ointments, powders, nose drops, steroids, etc. However, only 14 had used antihistamines before our study was begun. Thirteen reported that dimethpyrindene was considerably more effective than any drug previously used. Only one patient felt that other antihistamines were better.

Side Effects

Although slight drowsiness was reported by 21 patients, the dramatic relief obtained was considered by them to be worth this evanescent inconvenience. It presented very little concern to any of the patients, and in no case was it necessary to discontinue the drug.

There were only four cases of marked drowsiness, one of which immediately subsided when dosage was reduced and changed from tablets to lontabs. It was not necessary to discontinue the drug in any case because of this side effect.

There were two cases of slight nausea, and one patient complained of loss of appetite.

We were gratified to note that none of the more serious effects encountered with other antihistamines, such as vertigo, vomiting, blurring of vision, etc., was reported in any of our cases.

In patients receiving dimethpyrindene, Carpenter, et al.[4] made serial determinations of cephalin flocculation, thymol turbidity, albumin/globulin ratio, alkaline phosphatese, and blood counts. No abnormalities were noted. Thus we did not feel it necessary to repeat these studies.

Summary

1. A new antiallergic-antipruritic compound, dimethpyrindene maleate (Forhistal) was evaluated in 100 outpatients with common respiratory, gastrointestinal, and dermatological allergies. Included also were 12 patients with generalized pruritus (herpes zoster, chickenpox, measles, poison ivy, urticaria). Satisfactory relief of symptoms occurred in 82 per cent of all cases treated.

2. In the 12 cases of generalized pruritus, it is interesting to observe that all obtained "moderate" to "marked" relief.

3. In allergic conditions where higher dosages were required, some slight drowsiness has been observed, but in no instance was it found necessary to discontinue the drug. In only four instances dimethpyrindene caused "marked" drowsiness; in

one patient this side effect disappeared when dosage was lowered. Here also it was not deemed necessary to discontinue the drug. In our judgment, dimethpyrindene is most worthy of inclusion in today's index of antihistaminic drugs.

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Arizona GP's To Meet Oct. 12-14 in Tucson

The annual scientific session of the Arizona Academy of General Practice will be held at the Ramada Inn, Tucson, Arizona from October 12th through the 14th, 1961.

Principal speakers on the program are:

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Johns Hopkins
Topic: Cancer of the Cervix

Waldo E. Nelson, M.D.
Professor of Pediatrics
Temple University
Topic: Infections in the Newborn

Michael DeBakey, M.D.
Professor of Surgery
Baylor University Medical School
Topic: Vascular Surgery

Foster Matchett, M.D.
Assistant Professor
Department of Orthopedics
University of Colorado
Topic: Not announced.

Category Credit 1 will be given for this three day course. Address inquiries to:

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BOOKS

PHYSIOLOGY OF THE EYE: *Clinical Application,* 3rd Edition. By FRANCIS HEED ADLER, 790 pages, 372 illustrations, printed by C. V. Mosby Company, St. Louis, price $16.00.

This third edition of Physiology of the Eye, by Francis Heed Adler, contains probably twenty percent more "meat" than the second edition; this is attained by an increase of sixty pages and the use of smaller though quite readable type. The chapters on ocular muscles, binocular vision, aqueous humor, and intraocular pressure have been rewritten. The existence of a through and through circulation of the aqueous is emphasized. The reviewer rather would have liked to see more space devoted to the physiology, or perhaps pathology, in the relationship between corneal metabolism and contact lenses, in view of the current increase in use of the latter.

Dr. Adler skillfully bridges the gap between the research in basic sciences and their clinical applications. This is a book of value to the practicing ophthalmologist. It verges on impudence to criticize in any way the work of so intelligent and dedicated a worker as is Dr. Adler. However the index in this third edition is much less comprehensive than in the second (the second edition, for instance, shows sixty-nine references to the cornea and the new edition only forty-four; for the lens the older edition shows fifty-nine references, whereas the newer one has only twenty-six.) It will be a shame if the tremendous knowledge and lucid style Dr. Adler contributes in this book are crippled by an incomplete index.

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